



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

EPA Region 5 Records Ctr.



313497

FEB 19 2009

REPLY TO THE ATTENTION OF:

ACTION MEMORANDUM

SUBJECT: Action Memorandum Request for Removal Action at Southern Illinois Railcar Site, Cairo, Allen County, Ohio (B5QP)

FROM: Brian Kelly, On-Scene Coordinator
Emergency Response Branch 1, Oil Planning & Response Section

TO: Richard C. Karl, Director
Superfund Division

THRU: Beverly Kush, Chief
Oil Planning & Response Section

I. PURPOSE

The purpose of this memorandum is to request and document your approval for expending up to \$1,402,614 to abate an imminent and substantial threat to public health, welfare, and the environment posed by an ongoing discharge of high-ammonia and high-pH leachate into surface water at the Southern Illinois Railcar (SIR) Site located at 570 Ottawa Road, Cairo, Allen County, Ohio 45807.

On August 2, 2008, the Ohio Environmental Protection Agency (Ohio EPA) documented a drainage trench on the SIR Site discharging a dark brown liquid off-site into Warrington Ditch, a surface water that connects to Rattlesnake Creek. Field-testing showed that the dark brown liquid contained ammonia levels as high as 1,000 ppm and had a pH above 11 standard units (s.u.). On December 3, 2008, Allied Environmental Services (AES), a contractor working on behalf of Southern Illinois Railcar, provided the United States Environmental Protection Agency (U.S. EPA) with analytical results showing ammonia concentrations in Warrington Ditch as high as 3,130 mg/L. Under Ohio Administrative Code Section 3745-1-07, the maximum default criteria for ammonia in the Warrington Ditch is 13 mg/L. The default criteria for pH is 7.3 s.u. Ammonia is classified as a hazardous substance under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 101(14).

U.S. EPA intends to enter into an administrative order on consent with Southern Illinois Railcar to perform a removal action, which will mitigate the threats by preventing off-site migration of

leachate above established State of Ohio water quality standards. Failure to reach agreement may necessitate issuance of a unilateral administrative order and/or a fund-lead removal.

This response action will be conducted in accordance with Section 104(a)(1) of the CERCLA, 42 U.S.C. § 9604(a)(1), to abate or eliminate the immediate threat posed to public health and/or the environment by the presence of the hazardous substances. The uncontrolled condition of the hazardous substances present at the Site requires that this action be classified as a time-critical removal action. The project will require approximately 60 working days to complete.

There are no nationally significant or precedent-setting issues associated with the Site and the Site is not on the National Priorities List (NPL), 40 CFR Part 300, App. B.

II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID # OHN000510326

A. Site Description:

The Southern Illinois Railcar Site is located at 7570 Ottawa Road, Cairo, Allen County, Ohio 45807, latitude 40.847 / longitude -84.083. The facility is a former fertilizer plant adjacent to the Warrington Ditch, a tributary of Rattlesnake Creek and eventually the Little Auglaize River. The Site is currently owned and operated by Southern Illinois Railcar as a railcar repair facility. Southern Illinois Railcar is a division of SC Rail Leasing America, Inc., a subsidiary of Sumitomo Corporation of America.

B. Other Action to Date:

1) Previous Actions:

On December 2, 2008, the Ohio EPA documented a drainage trench on the Southern Illinois Railcar Site discharging a dark brown liquid into Warrington Ditch. Field-testing showed that the dark brown liquid contained ammonia levels as high as 1,000 ppm and had pH above 11 standard units (s.u.). On December 3, 2008, Allied Environmental Services (AES), working on behalf of Southern Illinois Railcar, provided U.S. EPA with analytical results showing ammonia concentrations in Warrington Ditch as high as 3,130 mg/L. Under Ohio Administrative Code Section 3745-1-07, the maximum default criteria for ammonia in the Warrington Ditch is 13 mg/L. The default criteria for pH is 7.3 s.u..

Southern Illinois Railcar's contractor AES is performing emergency response and investigation actions. Starting on December 3, 2008 and continuing to date, AES has collected 744,052 gallons of leachate and storm water by use of vacuum trucks. In addition, AES has excavated approximately 460 cubic yards of soil and soil/fertilizer which is pending disposal.

AES performed a site assessment, collecting 41 bore hole samples from 0-2 ft, 2-4 ft, and in some locations 4-6 ft intervals. Data taken by AES and provided to U.S. EPA show ammonia levels at the 0-2 ft interval as high as 14,200 mg/kg (Bore Hole-16: 0-2 ft: Sample ID SIR-121008-ME-040). See attached Sample Results map.

A General Notice of Potential Liability was issued to Southern Illinois Railcar on December 30, 2008. Southern Illinois Railcar responded by letter dated January 8, 2009, indicating that it had commenced several of the response actions cited by U.S. EPA in the General Notice letter, and that it was prepared to perform the remaining response activities pursuant to an agreed workplan.

C. Community Characteristics

In Ohio the low-income percentage is 30% and the minority percentage is 16%. To meet the Environmental Justice (EJ) concern criteria, the area within 1 mile of the Site must have a population that is twice the state low-income percentage and/or twice the state minority percentage. That is, the area must be at least 60% low-income and/or 32% minority. At this Site, the low-income percentage is 40% and the minority percentage is 2% as determined by Arcview 3.0 EJ analysis. Therefore, this Site does not meet the Region's EJ criteria based on demographics as identified in "Region 5 Interim Guidelines for Identifying and Addressing a Potential EJ Case, June 1998."

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

The conditions at the Site present a release or a threat of release of a CERCLA hazardous substance, and meet the criteria for an emergency removal action provided for in the National Contingency Plan (NCP), 40 CFR § 300.415(b)(2). These criteria include the following identified below:

i. Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants.

Ammonia is a hazardous substance under CERCLA section 101(14). On August 2, 2008, the Ohio EPA documented a drainage trench on the SIR Site discharging a dark brown liquid to Warrington Ditch. Field-testing showed that the dark brown liquid contained ammonia levels as high as 1,000 parts per million. On December 3, 2009, Allied Environmental Services (AES), working on behalf of Southern Illinois Railcar, provided U.S. EPA with analytical results showing ammonia levels as high as 3,130 mg/L. Under Ohio Administrative Code Section 3745-1-07, the maximum default criterion for ammonia in the Warrington Ditch is 13 mg/L.

According to U.S. EPA's Effluent Guidelines (February 2004), "Ammonia is toxic to aquatic life and reduces the level of oxygen in the waterbody. Too much ammonia and other forms of nitrogen can lead to fish kills, reduced biodiversity, and growth of toxic organisms."

Ammonia levels in excess of the recommended limits may harm aquatic life. Although the ammonia molecule is a nutrient required for life, excess ammonia may accumulate in the organism and cause alteration of metabolism or increases in body pH (NRC, 1979). Fish may suffer a loss of equilibrium, hyperexcitability, increased respiratory activity and oxygen uptake, and increased heart rate. At extreme ammonia levels, fish may experience convulsions, coma, and death. Experiments have shown that the lethal concentration for a variety of fish species ranges from 0.2 to 2.0 mg/l. Trout appear to be most susceptible of these fish and carp the least (USEPA, 1987).

ii. High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate; this factor is present at the Site due to:

Ammonia is a hazardous substance under CERCLA section 101 (14). GeoProb data taken by AES and provided to U.S. EPA show ammonia levels in Site soils at the 0-2 ft interval as high as 14,200 mg/kg (Bore Hole-16: 0-2 ft: Sample ID SIR-121008-ME-040). Ammonia in the 0-2 ft interval may continue to migrate from the Site.

iii. Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released; this factor is present at the Site due to:

Ammonia is a hazardous substance under CERCLA section 101 (14). The attached Sample Results Map provided by AES shows source area ammonia at the Northern Warehouse and former Southern Warehouse migrating off-site and into Warrington Ditch. The primary route ammonia is leaving the Site is through storm water run-off.

iv. The availability of other Federal or State response mechanisms to respond to the release;

This factor is present. On December 2, 2008, the Ohio EPA On-Scene Coordination Mike Gerber requested U.S. EPA assistance in conducting an emergency response. A follow-up request by Kevin Clouse, Chief of Ohio EPA's Division of Emergency & Remedial Response, was made through U.S. EPA Section Chief Mark Durno.

IV. ENDANGERMENT DETERMINATION

Given the Site conditions, the nature of the hazardous substances, and the potential exposure pathways described in Sections II and III above, actual or threatened releases of hazardous substances from this Site, if not addressed by implementing the response actions selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, or welfare, or the environment.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed action description

- (a) Develop and implement a site health and safety plan;
- (b) Take interim measures to collect high-pH and high-ammonia leachate and prevent off-site release of high-pH and high-ammonia leachate to the maximum extent practicable as determined by U.S. EPA;
- (c) Develop and implement a site work plan to investigate then prevent site discharges of high-pH and high-ammonia leachate from exceeding State of Ohio water quality standards; and
- (d) Remove heavily contaminated soils and contaminated building debris that may be causing discharge of leachate for off-site disposal in accordance with U.S. EPA's Off-Site Rule (40 C.F.R. § 300.440) or treat soils on-site to prevent formation of leachate run-off from exceeding State of Ohio water quality standards.

Applicable or Relevant and Appropriate Requirements

This cleanup is being conducted as a Time-Critical Removal Action. All identified established ARARs within the scope of this removal will be complied with to the extent practicable. A letter was sent to Tom Poffenbarger of Ohio EPA on January 7, 2009, asking the State to identify ARARs. To date Ohio EPA has identified Ohio Administrative Code Section 3745-1-07: Water Use Designations and Statewide Criteria.

Off-Site Rule

All hazardous substances, pollutants or contaminants removed off site pursuant to this removal action for treatment, storage and disposal shall be treated, stored or disposed of at a facility in compliance, as determined by U.S. EPA, with the U.S. EPA Off-Site Rule, 40 C.F.R. § 300.440.

Disproportionate Finding

The response actions described in this memorandum directly address the actual or threatened release at the Site of a hazardous substance, or of a pollutant, or of a contaminant, which poses an imminent and substantial endangerment to public health, welfare or the environment. These response actions do not impose a burden on affected property disproportionate to the extent to which that property contributes to the conditions being addressed.

The response actions proposed, collect high-pH and high-ammonia leachate, investigating then preventing site discharge of leachate, and the removal of heavily contaminated soils or the treat of heavily contaminated soils, are consistent with the long-term remedy and are expected to mitigate the discharge of high-pH and high-ammonia leachate from exceeding State of Ohio water quality standards.

Post-Removal Site Control

In accordance with Section 300.415(l) of the NCP, U.S. EPA will pursue appropriate arrangements for post-removal Site controls to ensure the long-term integrity of the removal. Removal of heavily contaminated soil and capping of the source area is anticipated to minimize the need for post-removal site control; however, stormwater management may be included as part of the remedy and will be the responsibility of SIR under the oversight of Ohio EPA.

Schedule

Removal activities required approximately 60 on-site working days to complete.

Detailed cleanup contractor costs are presented in attachment 1

B. ESTIMATED EXTRAMURAL COSTS:

Regional Removal Allowance Costs

Cleanup Contractor Costs	\$1,139,666
--------------------------	-------------

Other Extramural Cost Not Funded from the Regional Allowance:

START	\$ 79,998
-------	-----------

Subtotal, Extramural Subtotal	<u>\$1,219,664</u>
-------------------------------	--------------------

Extramural Costs Contingency (15% of Subtotal)	\$ 182,950
---	------------

TOTAL, Removal Action Project Ceiling	\$1,402,614
---------------------------------------	-------------

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

If action is delayed, potential environmental risks posed by high-pH and high-ammonia leachate entering surface waters may be aggravated or increased by site operations and weather conditions.

VII. OUTSTANDING POLICY ISSUES

None

VIII. ENFORCEMENT

For administrative purposes, information concerning the enforcement strategy for this Site is contained in the attached Enforcement Confidential Addendum.

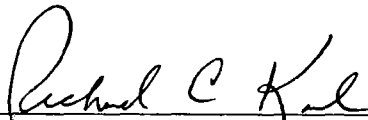
The total EPA costs for this removal action based on full-cost accounting practices that will be eligible for cost recovery are estimated to be \$ 2,317,580¹.

$$(1,402,614 + 20,000) + (62.91\%^1 \times 1,422,614) = \$ 2,317,580$$

IX. RECOMMENDATION

This decision document represents the selected removal action for the Southern Illinois Railcar Site, Cairo, Ohio, developed in accordance with CERCLA as amended, and not inconsistent with the NCP. This decision is based on the Administrative Record for the Site (See attachment 2). Conditions at the Site meet the NCP §300.415(b)(2) criteria for a removal action, and your approval is recommended. The total project ceiling, if approved, will be \$1,402,614. Of this, \$1,322,616 may be used for cleanup contractor costs. You may indicate your decision by signing below.

APPROVE: _____


Richard C. Karl, Director
Superfund Division

Date: 2-19-09

DISAPPROVE: _____

Richard C. Karl, Director
Superfund Division

Date: _____

Enforcement Addendum

Attachments:

² Direct Costs include direct extramural costs and direct intramural costs.

Attachment 1 - Cleanup Contractor Estimate
Attachment 2 - Administrative Record Index
Attachment 3 - Environmental Justice Analysis
Attachment 4 - Independent Government Cost Estimate
Attachment 5 – Sample_Results_Map and Figure_2

cc: David Chung, U.S. EPA, 5104A
Michael Chezik, U.S. Department of the Interior, w/o Enf. Addendum
Chris Korleski, Director, Ohio EPA, w/o Enf. Addendum
Marc Dann, Ohio Attorney General, w/o Enf. Addendum
Tom Poffenbarger, w/o Enf. Addendum
Ohio Environmental Protection Agency
Surface Water Division
347 North Dunbridge Road
Bowling Green, Oh 43402

ENFORCEMENT ADDENDUM

**SOUTHERN ILLINOIS RAILCAR SITE
CAIRO, ALLEN COUNTY, OHIO**

FEBRUARY 2009

(REDACTED 3 PAGES)

**ENFORCEMENT CONFIDENTIAL
NOT SUBJECT TO DISCOVERY**

ATTACHMENT 1
Cleanup Contractor Estimate

Southern Illinois Railcar Site
Cairo, Allen County, Ohio

February 2009

Transportation and Disposal	\$668,000
Personnel & Equipment	\$335,066
Materials & Misc	\$136,600
TOTAL	\$1,139,666

ATTACHMENT 2

**U.S. ENVIRONMENTAL PROTECTION AGENCY
REMOVAL ACTION**

**ADMINISTRATIVE RECORD
FOR
Southern Illinois Railcar Site
Cairo, Allen County, Ohio**

February 2009

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
1	02/00/04	U.S EPA	Public	Effluent Guidelines for Meat and Poultry Products	2
2	12/08/04	Allied Environmental Services, Inc.	U.S. EPA	Figure 2 - Site Work Zones at the Southern Illinois Rail Facility	1
3	12/08/04	Allied Environmental Services, Inc.	U.S. EPA	Figure 3 - Proposed Soil Groundwater Sample Location Map for Southern Illinois Railway Facility	1
4	12/03/08	Allied Environmental Services, Inc.	U.S. EPA	Surface Water Sampling Results at the Southern Illinois Railcar Site	1
5	12/10/08	Ohio EPA	Ohio EPA	Emergency Response Section District Office Investigation Report for the Southern Illinois Railcar Ammonia Release	60
6	12/17/08	Ohio EPA	U.S. EPA	Water Quality Standards for Ammonia	1
7	12/30/08	Nachowicz, L., U.S. EPA	Bouquet, K., Southern Illinois Railcar	Letter re: General Notice of Potential Liability for the Southern Illinois Railcar Site w/Attachment	6
8	01/06/09	Allied Environmental Services, Inc.	U.S. EPA	Analytical Data for the Southern Illinois Railcar Site	9

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
9	01/07/09	Kelly, B., U.S. EPA	Distribution List	Pollution Report (POLREP) No. 1 - PRP Lead for the Southern Illinois Railcar Site	2
10	01/07/09	Allied Environmental Services, Inc.	Southern Illinois Railcar	Initial Site Assessment Results for Southern Illinois Railcar	214
11	01/07/09	Elkins, M., Allied Environmental Services, Inc.	Kelly, B., U.S. EPA	E-mail Message re: Summary of Waste Hauling at the Southern Illinois Railcar Site	2
12	01/07/09	Gerber, M., Ohio EPA	Kelly, B., U.S. EPA	E-mail Message re: Ohio EPA's Request for U.S. EPA Assistance in Conducting an Emergency Response at the Southern Illinois Rail- car Site	1
13	01/21/09	Ohio EPA	Kelly, B., U.S. EPA	Water Quality Standards for Ammonia Correction	1
14	00/00/00	Kelly, B., U.S. EPA	Karl, R., U.S. EPA	Action Memorandum re: Request for Removal Action at the Southern Illinois Railcar Site (PENDING)	

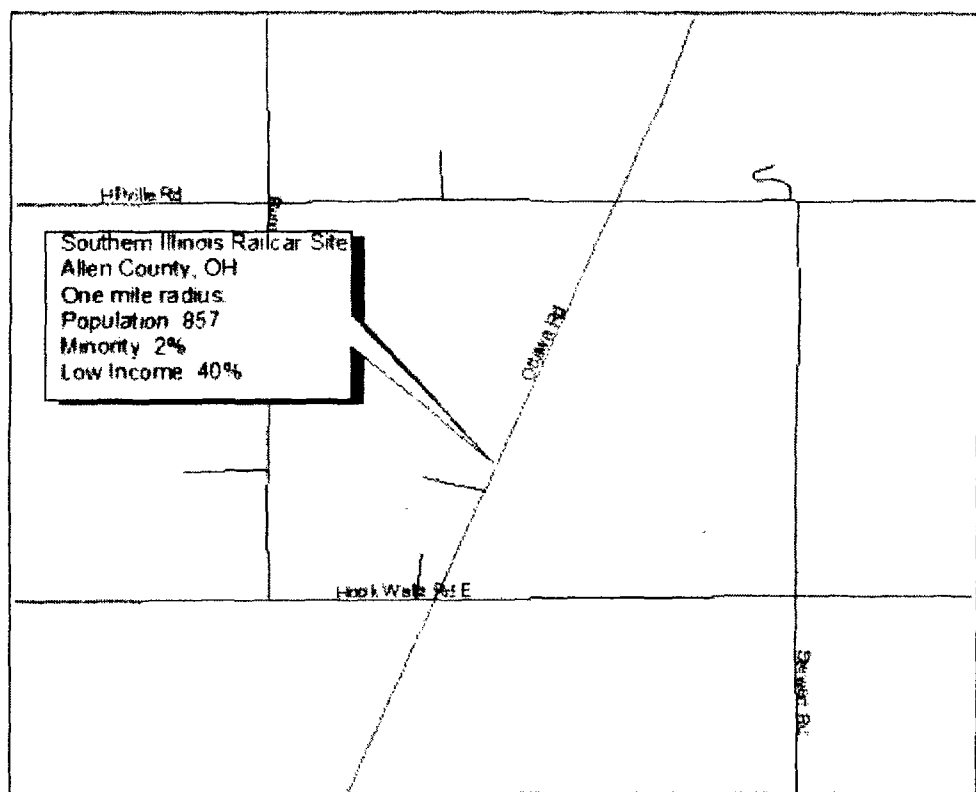
**ATTACHMENT 3
ENVIRONMENTAL JUSTICE ANALYSIS**

**Southern Illinois Railcar Site
Cairo, Allen County, Ohio**

February 2009

Region 5 Superfund EJ Analysis

Southern Illinois Railcar Site Cairo, OH



State of Ohio averages:

Minority 16%

Low Income 30%

U.S. EPA Region 5
Environmental Justice Case Criteria
for State of Ohio

Minority 32% or greater

Low Income 60% or greater

0 0.5 1 1.5 2 Miles

Date of Analysis: 1/2008

Source: Census Bureau 2000 Census
U.S. Dec. 10

ATTACHMENT IV

INDEPENDENT GOVERNMENT COST ESTIMATE

**SOUTHERN ILLINOIS RAILCAR SITE
CAIRO, ALLEN COUNTY, OHIO**

FEBRUARY 2009

(REDACTED 2 PAGES)

NOT RELEVANT TO THE SELECTION OF THE REMOVAL ACTION

ATTACHMENT 5
Sample Results Map and Figure 2
Southern Illinois Railcar Site
Cairo, Allen County, Ohio

February 2009

Location	BH-18	BH-9	BH-10	BH-11	BH-16	BH-17	BH-20	BH-21	BH-21	BH-21	BH-22	BH-22	As Lined	Drainage Line	
	(in ft)	(in ft)	(in ft)	(in ft)	(in ft)	(in ft)	(in ft)	(in ft)	(in ft)	(in ft)	(in ft)	(in ft)		(original surface)	
Depth (ft)	0	0.2	2.4	4.8	6.2	7.4	0.2	0.2	0.2	0.2	0.2	0.2	Surface	Surface	
192	78.6	23.1	59.9	4.750	2.250	3.74	983	10,500	12,500	5,350	59.2	152	25.5	24.1	
Niche-11	242	213	33.1	1.45	1.150	8.65	156	184	785	1535	1535	3.14	2.8	2.8	
Niche-12	242	213	33.1	1.45	1.150	8.65	156	184	785	1535	1535	3.14	2.8	2.8	
TN-1	1,450	1,830	1,550	1.70	5.950	9.550	10,600	11,700	10,250	14,750	6,850	2,150	1,150	71	69.0

[illegible][illegible]

FIGURE 3 **ALLIED ENVIRONMENTAL SERVICES INC.**
PROPOSED SOIL & GROUNDWATER
SAMPLE LOCATION MAP
SOUTHERN ILLINOIS RAIL FACILITY
7570 OTTAWA ROAD
CAIRO, OHIO

SCALE 1" = 140'	DATE 12/08/04	DRAWN BY: CR
-----------------	---------------	--------------

